

## TAXONOMIC STUDY OF *HEDYOTIS PALMERI* (RUBIACEAE)

B.L. Turner

Department of Botany, University of Texas, Austin, Texas 78713 U.S.A.

### ABSTRACT

*Hedyotis palmeri* (A. Gray) W.H. Lewis (= *Houstonia palmeri* A. Gray) is a species of northcentral México occurring in mostly shallow soils from 1000-2200 m. Two morphogeographical infraspecific categories are recognized: var. *palmeri* (including *H. longipes* S. Wats.), occurring in southeastern Coahuila and most of Nuevo León from 1600-2200 m; and var. *muzquizana* B.L. Turner, var. nov., occurring in northcentral Coahuila mostly at 1000-1600 m. The latter differs from the former in being a taller plant with larger corollas and longer pedicels. A map showing the distributions of the two taxa is included. Lectotypification for *H. longipes* and *H. palmeri* is provided.

KEY WORDS: Rubiaceae, *Hedyotis*, *Houstonia*, México, systematics

Terrell (1991) provided an overview of the genera *Hedyotis*, *Houstonia*, and *Oldenlandia* for North America. In this, *Hedyotis palmeri* (A. Gray) W.H. Lewis was positioned in the genus *Houstonia*, subgenus *Ericotis* Terrell. This subgenus includes *Hedyotis acerosa* A. Gray which I have recently studied (Turner, 1996), concluding that it is seemingly adequately treated as an element of *Hedyotis*. In working over that complex I became interested in the regional variation displayed by *H. palmeri*, hence the present paper.

Terrell did not recognize infraspecific categories under *Hedyotis palmeri*, but a sorting of the specimens available to me, most of these annotated by him, showed that there was a series of populations in northcentral Coahuila made up of larger wirier plants, with larger corollas on more elongate pedicels than occurs in typical populational elements of *H. palmeri*. The two series of populations apparently do not coexist, and while clear intermediates between these are not known, their close relationship is so obvious that I have described the new taxon as but varietally distinct.

A key to these two varieties follow, along with a map showing their distribution (Figure 1), based upon material on file at GH, LL, SRSC, TEX.

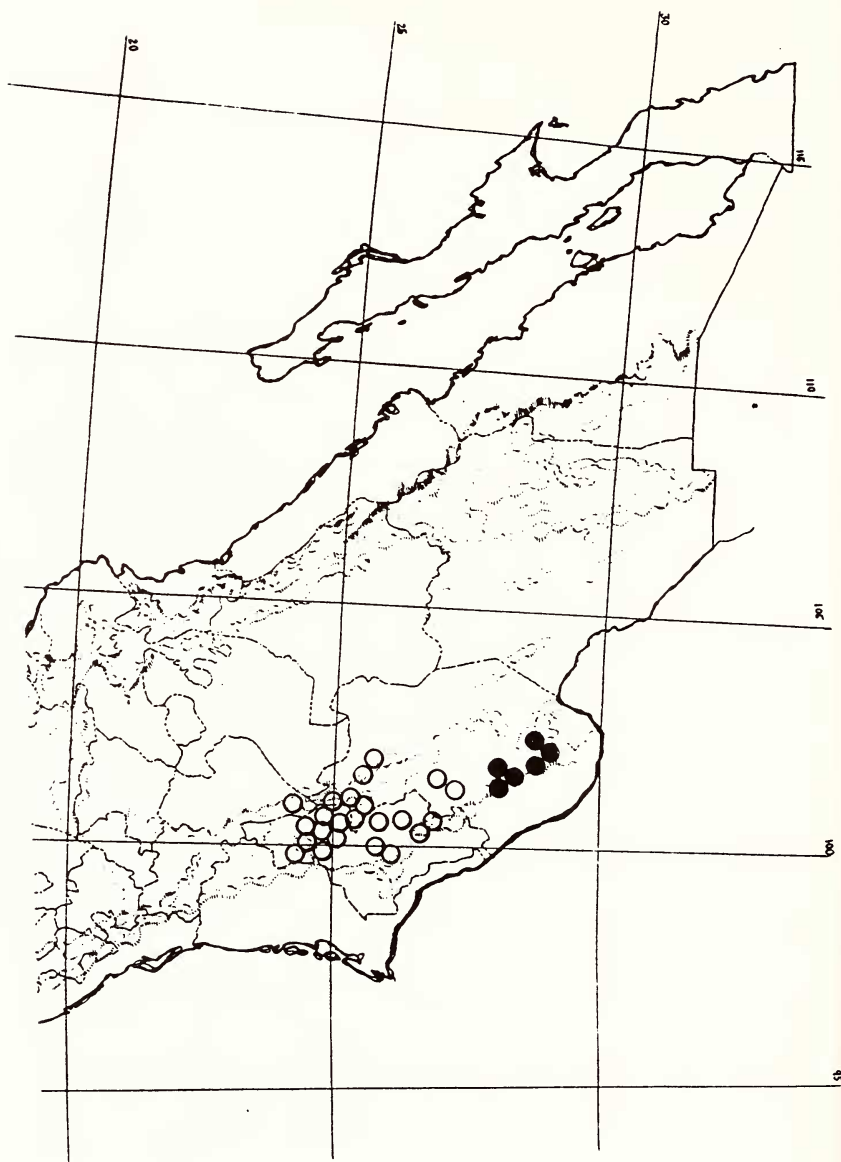


Figure 1. Distribution of *Hedyotis palmeri*: var. *muzquizana* (open circles); var. *palmeri* (closed circles).

Key to varieties of *Hedyotis palmeri*

- Mature corolla tubes mostly (6-)8-10 mm long; pedicels mostly 20-30 mm long; n Coahuila.....var. *muzquizana*  
 Mature corolla tubes mostly 4-5(-8) mm long; pedicels mostly 5-20 mm long; s Coahuila, Nuevo León.....var. *palmeri*

**HEDYOTIS PALMERI** (A. Gray) W.H. Lewis var. **PALMERI**, *Rhodora* 63:222. 1961. BASIONYM: *Houstonia palmeri* A. Gray, Proc. Amer. Acad. Arts 17:202. 1882. TYPE: MEXICO. Coahuila: "Lerios, 45 mi E of Saltillo", Jul 1880, *Edward Palmer* 397 (LECTOTYPE [here selected]: GH!). The lectotype is mounted on the same sheet with two other collections, all of these cited in the protologue: *Palmer* 398, Jul 1880, from "40 mi S of Saltillo", and *Palmer* 2117, Jul 1880, from "6 mi E of Saltillo". The several specimens are very similar but the collection selected as the lectotype is better developed as to flowering and fruiting material.

*Houstonia longipes* S. Wats., Proc. Amer. Acad. Arts 18:97. 1883. *Hedyotis longipes* (S. Wats.) W.H. Lewis, *Rhodora* 63:222. 1961. TYPE: MEXICO. Nuevo León: Monterrey, Feb 1880, *Edward Palmer* 395 (LECTOTYPE [here selected]: GH!). The lectotype is mounted on the same sheet with two other collections: *E. Palmer* 394, Sep 1880, from Monclova, Coahuila, and *Gregg s.n.*, 29 May 1847, from "Cerralbo", Coahuila (?). All of these are very similar and all were cited in the protologue. The Gregg specimens are the only ones having both flowers and fruits, the corolla tubes being ca. 4 mm long. Corollas are absent on the remaining collections.

This is the commonly collected widespread variety of the species and is known to me only by collections obtained from the south and east of var. *muzquizana* (Figure 1).

**HEDYOTIS PALMERI** (A. Gray) W.H. Lewis var. **MUZQUIZANA** B.L. Turner, var. nov. TYPE: MEXICO. Coahuila: Mpio. M. Muzquiz, ca. 130 road km NW of Muzquiz on Hwy 2A, "midslope of Sa. La Encantada along road up to tunnel entrance to La Encantada basin and mining area. Steep NW - facing slope, . . . common but scattered, mostly in moister microsites", 28° 30' 40" N × 102° 19' 30" W, 3 Jun 1992, *Guy Nesom* 7380 (with M. Mayfield) (HOLOTYPE: TEX!; Isotype: MEXU).

Similis *H. palmeri* (A. Gray) W.H. Lewis var. *palmeri* sed differt tubis corollarum plerumque 8-10 mm longis (vice tuborum plerumque 4-6 mm longorum) et pedicellis plerumque 20-30 mm longis (vice 5-20 mm longis).

ADDITIONAL SPECIMENS EXAMINED: MEXICO. Coahuila: Mpio. M. Muzquiz, Cuesta del Plomo, 1000 m, 7 Jun 1972, *M.C. Johnston et al.* 7550p (TEX); Muzquiz, spring 1935, *Marsh* 330 (GH,SRSC,TEX); Santa Rosa Mts., 8 Jul 1938, *Marsh* 1251 (GH,TEX); 15 air km NW of La Babia, 18 May 1992, *Mayfield* 1426

(TEX); SW margin of Serranias del Burro, 1400-2100 m, 23 Jun 1991, Ruiz 47 (TEX); Rancho Agua Dulce, 1 Jul 1936, Wynd & Mueller 400 (GH).

Nearly all of the specimens cited above have the characters alluded to in the diagnosis, and it is clear that these represent populational units distinct from var. *palmeri*. Additionally, the plants concerned, in general, appear to be taller, wirier, with a less branched inflorescence than occurs in var. *palmeri*.

Terrell annotated several or more of the above sheets as *Hedyotis palmeri* without comment. In spite of numerous collections of var. *palmeri* on file at LL, TEX (40 sheets), I have not detected any clear intermediates between these allopatric entities except for a single collection from "Alamar", Pablillo, SE of Galeana, Nuevo León (Pennell 17191 [GH]), having corolla tubes 6-8 mm long, otherwise it is similar to var. *palmeri*. Late-flowering specimens of var. *muzquizana*, however, occasionally produce small flowers (e.g., Wynd & Muller 400).

It is possible that future field workers will elevate var. *muzquizana* to specific rank, typical specimens differing markedly from var. *palmeri*.

#### ACKNOWLEDGMENTS

I am grateful to GH and SRSC for the loan of materials. Gayle Turner provided the Latin diagnosis, and she and Piero Delprete reviewed the article.

#### LITERATURE CITED

- Terrell, E.E. 1991. Overview and annotated list of North American species of *Hedyotis*, *Houstonia*, *Oldenlandia*, and related genera. *Phytologia* 71:212-243.  
Turner, B.L. 1996. Taxonomy of the *Hedyotis acerosa* (Rubiaceae) complex. *Phytologia* 79:83-88.